Remarks

Formal entry of this responsive amendment is respectfully requested. Moreover, reconsideration and withdrawal of the outstanding objections and rejections, in consideration of this submission, is respectfully requested.

The originally submitted Specification was revised to correct informalities noted therein (including grammatical and others) as well as to effect revisions that are, basically, of a minor formatting nature. Because of the extensiveness of the changes being effected, applicants, through their undersigned representative, are submitting herewith (as **Attachment A**) a Substitute Specification directed thereto. It is submitted, new matter is not being introduced, either by addition and/or deletion. Also, since the accompanying Substitute Specification is a voluntary submission by applicants, enclosed herewith, also, is a marked-up copy of the original Specification showing the changes being implemented therein (see **Attachment B**). Acceptance therefor of the Substitute Specification as a replacement of the originally submitted Specification is respectfully requested.

A new, replacement Abstract, which conforms to the USPTO requirements, is also being provided. Accordingly, withdrawal of the outstanding objected directed thereto is respectfully requested.

Acceptance, also, of the replacement drawing sheet for Sheet 5/6, directed to Fig. 7 of the drawings, is respectfully requested. The changes formally made thereto, as explained hereinabove, are directed to minor formal matters. This should clearly become apparent from the accompanying annotated illustration in conjunction with the related description thereof, in the Specification.

With this filing, claims 1-44 are now pending, of which claims 1-6, 10-13, 16, 22-24, 29-30 and 34-39 are currently amended and claims 41-44 are newly presented. The amendments made to the original claims are, generally, of a minor editorially formatting nature, clearly not involving the scope thereof. For example, in each of the original independent claims, the preamble thereof was revised as to form and not in substance. The other revisions effected are, basically, of an obvious grammatical nature or to maintain consistency in the set forth limitations within a claim. Regarding original dependent claim 22, also, it has been amended so as to appropriately dependent on a single claim. Accordingly, withdrawal of the outstanding objection in Item 2, on page 2 of the Office Action, is respectfully requested.

The new claims were added in consideration of more fully covering what applicants consider as their invention. These claims cover both a transmitter as well as a receiver. With regard to Fig. 1 of the drawings, the transmitter can be considered as relating to the transmitting portion of the device of the master unit 2 and the receiver can be considered as corresponding to the receiver portion of the device of the slave unit 6, with regard to the low power frequency hopping network such as employed in connection with the Bluetooth device scheme, although not limited thereto. Fig. 7 of the drawings is an example of a suitable transceiver unit.

The newly added claims also cover a method of providing clock information for effecting synchronization (to a common time reference having distinguishable instances) of the receiver with the transmitter. These claims, for example, are intended to cover an implementation value in which the device sends, for example, the Bluetooth clock value instead of the real time clock value. The newly added claims are presented somewhat differently from that of the other claims

in that they recite "a clock value" instead of a "real time clock value" and "a low power frequency hopping network" instead of a "network." With regard to the example illustration of the transceiver unit in Fig. 7 of the drawings, which is usable as a master unit or as a slave unit, a frequency hopping controller 148 is linked to both the transmitter Tx 144 as well as to the receiver Rx150. The invention according to the newly added claims 41-44 similarly to that covered by claims 1-40, it is submitted, is a clear and patentable improvement over that previously known.

According to the outstanding Office Action, claims 1, 2, 6, 9 and 13-15 stand rejected under 35 USC §103(e) as anticipated by Smolentzov et al (USP 6,788,656); claims 16, 17, 22, 31-35 and 37-40 stand rejected under 35 USC §103(a) as being obvious over Smolentzov et al's teachings; claims 7, 8, 10-12 and 23-30 stand rejected under 35 USC §103(a) over the combination of Smolentzov et al in view of Haartsen (Publication); and claims 3-5, 18-21 and 36 stand rejected under 35 USC §103(a) over the combination of Smolentzov et al in view of Geller et al (GB 2278519A). It will be shown, hereinbelow, the invention according to these claims and, also, according to the newly presented claims 41-44, could not have been achievable in the manner as cited in the outstanding rejections. Therefore, insofar as presently applicable, these rejections are traversed and reconsideration and withdrawal of the same is respectfully requested.

It is alleged in the rejection of the independent claims, i.e. claims 1, 16 and 34-40, that the invention covered therein is either anticipated or is rendered obvious in view of Smolentzov et al's teachings. Smolentzov et al's disclosure is directed to a communication scheme such as for a cellular radio communication system. In particular, Smolentzov et al disclosed a method by which BRFPs (e.g., personal computers) may be synchronized relative to one another when communicating to a BPP (e.g., a printer). In Fig. 9 of Smolentzov et al, the flow chart is illustrative of a

method where the real time clock of a BRFP in one piconet is calculated by a BRFP in another piconet. Such a scheme, according to Smolentzov et al, is performed when more than one BRFP (from different piconets) have established a link with one and the same BPP. In the related description of the flow chart in Fig. 9 of Smolentzov et al, which begins in column 9, line 35, the BRFP 105 and the BRFP 106 in the system 100, in Fig. 1, have established a communication link with the BPP 102 (laptop computer).

It appears that in the rejection of claim 1 of the present application, the BRFP's of Smolentzov et al's communication scheme have been improperly equated with the transmitter set forth in claim 1. Using Smolentzov et al's flow chart in Fig. 9 thereof, it can be said that Smolentzov et al disclosed a scheme such that the time difference between, for example, BRFP 105 and BPP 102 is calculated and is transmitted to a BCCFP 108 which stores it (see steps 901 - 902). The time difference between BRFP 106 and BPP 102 is then calculated and transmitted to BCCFP 108 (see steps 903-904). The BCCFP 108 then calculates the time difference between BRFP 106 and BRFP 105, using the equation at the top of column 10 (see step 905). With reference to Fig. 10 of Smolentzov et al, moreover, the BCCFP 108 uses the calculated time differences of the BRFP's to order the BRFP's so that their use of a BPP is coordinated (see Figs. 11a and 11b in Smolentzov et al). Specifically, Fig. 10 illustrates a flow chart for coordinating the use of time slots in each piconet associated with the cellular radio communication system taught by Smolentzov et al.

In accordance with the present invention, synchronizing of a real time clock in the receiver to a real time clock in a transmitter would be effected by using a common time reference that has distinguishable instances (distinguishable instances are defined on page 5, lines 19-22, and page 6, lines 9-17 of the original

Specification). For example, the Specification provides two embodiments for implementing the invention, although not limited thereto.

With regard to the disclosed first example embodiment, the transmitter transmits a real time clock value and an identification of the instance at which that real time clock value was current to a receiver. The receiver receives the real time clock value at a later time and at a corresponding later instance. The receiver calculates the time difference between the instance at which the real time clock value was transmitted and the instance at which it was received. The time difference is then added on to the received real time clock value to synchronize the receiver's real time clock to the transmitter's real time clock (see Fig. 2 of the drawings and the discussion thereof beginning on page 5 of the original Specification).

With regard to the disclosed second embodiment, the transmitter reads a real time clock value and a first instance at which it is current. It then determines a second instance at which a receiver should synchronize its real time clock to the transmitter's real time clock . The transmitter then calculates the time difference between the first and second instances and adds it on to the real time clock value. The real time clock value (with the time difference added) and the identification of the second instance are transmitted to the receiver. The receiver synchronizes its real time clock value to the received real time clock value when the instance at the receiver is equal to the second instance. An example of this is given with regard to Fig. 3 of the drawings and the related discussion, beginning on page 7, line 7, of the original Specification.

An example application in accordance with both the first and second example disclosed embodiments is given in connection with the discussion of the operation of

the transceiver unit shown in Fig. 7 of the drawings. A common time reference 20, referred to in Figs. 2 and 3 of the drawings, is based upon the Bluetooth clock. The Bluetooth clock which is an existing accurate synchronized clock already used for FFH is reused as the common time reference 20. The Bluetooth clock is a synchronized clock which is shared amongst the devices participating in a piconet. In the master unit, the Bluetooth clock is the unit's clock, whereas for each slave unit, the Bluetooth clock is the unit's clock offset by a particular amount. The synchronization between the Bluetooth clocks is maintained by the synchronizer 152 under the control of the controller 160 (see page 14, line 22 *et seq.* in the original Specification). An instance in the Bluetooth clock reference can be defined by the frame or slot number n and a trigger instant within a frame or slot (page 15, line 8 *et seq.* in the original Specification). In accordance with operation thereof such as in the first embodiment and second embodiment, discussed above, an example description is given on page 16, line 23 *et seq.* and on page 17, line 20 *et seq.* of the original Specification.

The scheme taught by Smolentzov et al and that of the first and second example embodiments, insofar as the present invention is concerned, it is submitted, differ in a number of ways. For example, Smolentzov et al failed to teach a scheme in which the BRFP's synchronize to a common time reference having distinguishable instances such as presently called for in each of the independent claims 1, 16 and 34-40. Moreover, Smolentzov et al failed to teach a scheme in which each of the BRFP's comprises a clock which provides a common time reference having distinguishable instances. Smolentzov et al, in particular, failed to teach transmitting a real time clock value and its associated distinguishable instance to a receiver. Consequently, applicants submit, Smolentzov et al could not have

anticipated nor, for that matter, rendered obvious the invention such as set forth in claim 1 noting that Smolentzov et al failed to teach a scheme in which a "transmitter is arranged to synchronize to a common time reference having distinguishable instances." Moreover, as was shown hereinabove, Smolentzov et al's BRFP's did not comprise :"means for reading a real time clock at an identified instance of a common time reference" nor the further set forth aspect according to claim 1, calling for "means for transmitting an identification of the real time clock value for a first instance and an identification of the first instance."

Applicants also submit, it would not be obvious to one of ordinary skill in this area of technology to modify Smolentzov et al so that the communication scheme taught therein would fall within the scope of the present invention such as set forth in present claim 1 as well as in the corresponding dependent claims thereof. It is submitted, there is no teaching from Smolentzov et al that would have led one of ordinary skill in the art to provide a clock in each of Smolentzov et al's BRFP's that provides a common time reference having distinguishable instances, such as that presently called for. It is also submitted, there is neither discussion or suggestion from Smolentzov et al that the BRFP's should transmit a real time clock value and an identified instance of such a common time reference. In fact, Smolentzov et al taught away from the present invention such as set forth in claim 1. This is because Smolentzov et al disclosed a clock which provides a common time reference in conjunction with a separate device, i.e., the BCCFP 108 in Fig. 1, for example, which clock should be used for determining the time differences between the clocks in the different ones of the BRFP's. For at least the above reasons, the invention according to claim 1 and, also, according to the corresponding dependent claims

thereof could not have been anticipated nor rendered obvious in view of Smolentzov et al.

It is submitted, also, the above supportive discussion/rebuttal arguments are equally applicable with regard to independent claim 16 and the corresponding dependent claims thereof as well as with regard to independent claims 34 - 40 inclusive, noting that they contain, also, such featured aspects, although presented in a somewhat modified form. The newly added claims, it is submitted, are also considered patentable for the same and similar reasons.

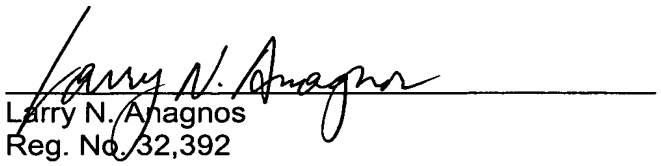
In fact, even if the further teachings of Haartsen and/or Geller et al were to have been combined with Smolentzov et al, the invention according to claims 1+, 16+ and 34-44 still would not have been realizable therefrom. For example, Haartsen was cited, according to the rejection, for its teaching of using Link Level synchronization for common time reference. However, Haartsen's teachings not withstanding, Haartsen still did not overcome the deficiencies of Smolentzov et al, insofar as the present claimed subject matter is concerned. Likewise, Geller is also similarly deficient. Accordingly, the invention set forth in the currently pending claims 1-44 could not have been rendered obvious even over the combined teachings of Smolentzov et al with Haartsen and/or Geller et al.

Therefore, in view of the amendments present hereinabove together with these accompanying remarks, reconsideration and withdrawal of the outstanding rejections as well as favorable action on all of the presently pending claims, i.e., claims 1-44 and an early formal notification of allowability of the above identified application is respectfully requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the

filing of this paper, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Dep. Acct. No. 01-2135 (1156.41276X00), and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP



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Amendments to the Drawings

The attached single replacement sheet (sheet 5/6) includes changes to Fig. 7. Namely, four (4) of the reference characters in Fig. 7 are being amended so as to conform to the corresponding reference characters referred to in the Detailed Description of the Specification. The noted changes are illustrated in red in the accompanying annotated sheet.

Attachments: (1) one replacement sheet directed to Fig. 7 of the drawings;
(2) one annotated sheet showing the changes made to Fig. 7.

Appendix

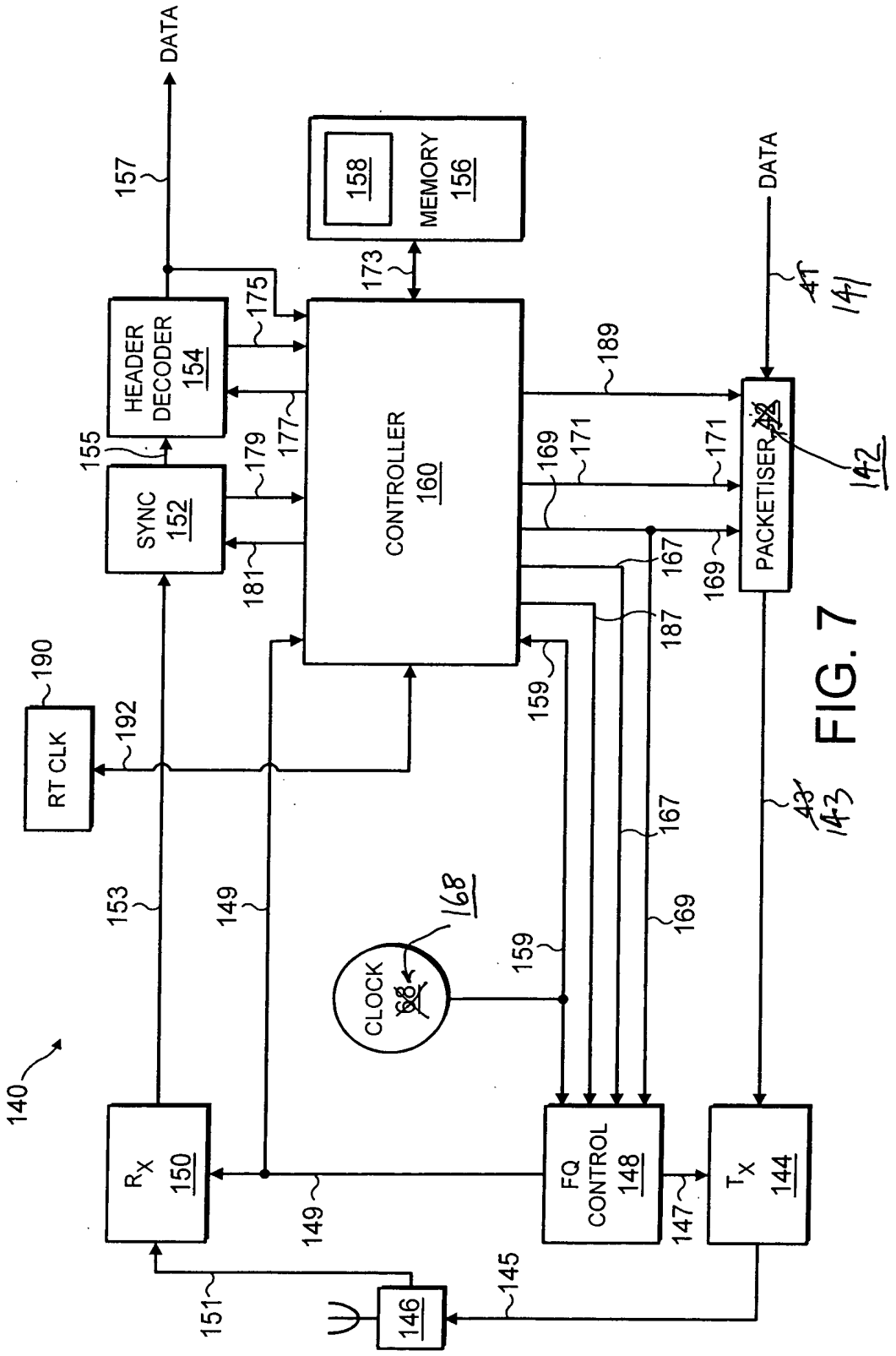

FIG. 7